MARTIN et al.
Appl. No. 10/814,221
October 14, 2005

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

- 1. (Original) A method of tuning a compressor stator blade, having a base portion and an airfoil portion, to achieve a desired natural frequency, comprising:
 - a) identifying the natural frequency of the compressor stator blade;
 - b) determining a different target natural frequency for the compressor stator blade; and
- c) removing material from the base portion of the compressor stator blade in an amount and in a configuration that achieves the target natural frequency.
- 2. (Original) The method of claim 1 wherein step c) is carried out by forming at least one groove in the base portion.
- 3. (Original) The method of claim 2 wherein said groove has substantially parallel sides and a substantially flat base.
 - 4. (Original) The method of claim 3 wherein said groove has a constant depth.
 - 5. (Original) The method of claim 3 wherein said groove has a constant width.
- 6. (Currently Amended) The method of claim 3 wherein said groove has a constant depth and a constant width.
- 7. (Original) The method of claim 2 wherein said groove extends fully across the width of the base portion.
- 8. (Original) The method of claim 1 wherein said base portion is substantially rectangular, with a pair of relatively longer side surfaces, a pair of relatively shorter end surfaces, a radially inner surface and a radially outer surface.

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- 9. (Original) The method of claim 8 wherein step c) is carried out by forming at least one groove in the base portion.
- 10. (Original) The method of claim 9 wherein said groove extends entirely across said base portion from one side surface to the other side surface.
- 11. (Original) A method of tuning a compressor stator blade so as to achieve a desired natural frequency, wherein the stator blade has an airfoil portion and a base portion that is substantially rectangular, with a pair of relatively longer side surfaces, a pair of relatively shorter end surfaces a radially inner surface and a radially outer surface; the method comprising:
 - a) identifying the natural frequency of the compressor stator blade;
 - b) determining a different target natural frequency for the compressor stator blade; and
- c) removing material from the base portion of the compressor stator blade in the form of at least one groove that is shaped to achieve the target natural frequency.
- 12. (Original) The method of claim 11 wherein said groove has substantially parallel sides and a substantially flat base surface.
 - 13. (Original) The method of claim 11 wherein said groove has a constant depth.
 - 14. (Original) The method of claim 12 wherein said groove has a constant width.
- 15. (Original) The method of claim 11 wherein said groove extends fully across the width of the base portion.
 - 16-18. Canceled.
- 19. (Original) The compressor stator blade of claim 16 wherein said groove has a constant depth and width.
- 20. (Original) The compressor stator blade of claim 16 wherein said base portion is substantially rectangular, with a pair of relatively longer side surfaces, a pair of relatively shorter

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end surfaces, a radially inner surface and a radially outer surface, and wherein said groove extends completely across a width dimension of said base portion from one longer side surface to the other longer side surface.

- 21. (New) A compressor stator blade made in accordance with the process of claim 1.
- 22. (New) A compressor stator blade made in accordance with the process of claim 11.